

**Part One: Declaration**

**Record of Decision Amendment  
Non-Populated Areas Operable Unit  
Bunker Hill Mining and Metallurgical Complex  
Shoshone County, Idaho  
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**1.0 Site Name and Location**

Non-Populated Areas Operable Unit, Bunker Hill Mining and Metallurgical Complex (Bunker Hill Superfund Site), Shoshone County, Idaho.

**2.0 Statement of Basis and Purpose**

This decision document presents an amended Selected Remedy to the 1992 Record of Decision (ROD) for the Non-Populated Areas Operable Unit of the Bunker Hill Superfund Site. This ROD Amendment addresses one portion of the Non-Populated Areas Operable Unit, the management of acid mine drainage (AMD) from the Bunker Hill Mine. The amended Selected Remedy was chosen in accordance with the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA), and to the extent practicable, the National Contingency Plan (NCP). This decision is based on the Administrative Record file for this action.

The State of Idaho concurs with the ROD Amendment.

**3.0 Assessment of Site**

The response action selected in this ROD Amendment is necessary to protect the public health or welfare or the environment from actual or threatened releases of hazardous substances into the environment. Such a release or threat of release may present an imminent and substantial endangerment to public health, welfare, or the environment.

**4.0 Description of Selected Remedy**

This ROD Amendment addresses the management of AMD from the Bunker Hill Mine. The ROD Amendment is necessary for the following reasons: 1) the wetlands system identified in the 1992 ROD for treatment of AMD and other site water sources was found to be incapable of meeting treatment levels; 2) The existing treatment facility has not been significantly upgraded since it was built in 1974, is not capable of consistently meeting current water quality standards, and requires repair and replacement to prevent equipment failure; and 3) the existing sludge disposal area is approaching capacity. The Selected Remedy for managing AMD from the Bunker Hill Mine is Alternative 3 - Phased Source Control/Treatment using sludge disposal Option A. The Selected Remedy is briefly described below.



AMD Source Control - This component of the remedy includes actions to reduce the quantity of surface water entering the mine and AMD created within the mine. It includes constructing the West Fork Milo Creek Diversion, rehabilitating the Phil Sheridan Raise, and plugging in-mine drill holes. These efforts will have the greatest impact on reducing the flow of mine water exiting the mine through the Kellogg Tunnel. Other flow reduction measures will be considered in the future based on performance monitoring and on an evaluation of the ability of additional measures to provide cost-effective water reductions.

AMD Collection - This component includes collection of AMD within the mine. The existing collection system will be used to collect water within the mine and transport it to the Kellogg Tunnel.

AMD Storage - AMD storage is required during those times when the treatment plant is shut down for maintenance or repairs, or when the mine water flow exceeds treatment capacity. Mine water flows in excess of 2,500 gallons per minute (gpm) will be temporarily stored in an existing lined surface pond located at the Central Treatment Plant (CTP) or in the mine using a new gravity system to divert water into the mine pool. A new mine pool extraction system will be installed to reduce the time needed to extract the stored water and to increase reliability.

AMD Conveyance - This component of the remedy includes the conveyance of mine water from the Kellogg Tunnel to the CTP. A new section of pipe will be added to the existing pipeline which extends from the Kellogg Tunnel to the lined pond in order to allow direct flow of AMD to the CTP rather than to the lined pond.

AMD Treatment - The CTP will be upgraded to improve efficiency and increase reliability, to make less sludge, and to achieve lower concentrations of metals in the plant's discharge. It would have an initial treatment capacity of 2,500 gpm. Additional capacity could be added in the future if determined to be necessary.

Sludge Management - EPA has selected sludge disposal Option A (disposal of sludge in beds on top of the Central Impoundment Area). However, given community concerns about competing disposal needs, preserving developable site land, and the potential development of regional disposal areas in the future as part of the Coeur d'Alene River Basin cleanup efforts, sludge disposal will be implemented in the following manner: 1) Implement initial upgrades to the CTP. These upgrades will reduce the current amount of sludge produced by about half, thereby doubling the expected life of the current disposal area; 2) When additional sludge disposal capacity is needed, reevaluate whether additional regional disposal capacity has become available as part of the Basin cleanup efforts that would make offsite disposal more cost-effective. If so, pursue offsite sludge disposal. If not, construct one 10-year disposal bed on the CIA; 3) Step 2 would be reconsidered prior to the construction of additional sludge beds on the CIA.

Monitoring - Monitoring of the Selected Remedy will include an assessment of untreated mine water at the Kellogg Tunnel portal, the quality of water treated at the CTP and measured where effluent is discharged into Bunker Creek, and the performance of source control actions to determine if additional flow reduction measures or treatment capacity are warranted.

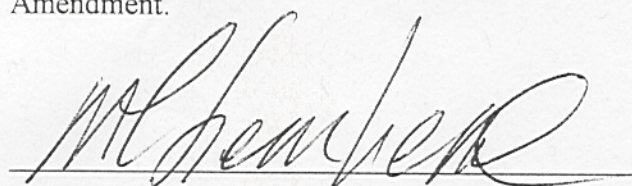




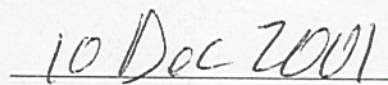
effluent is discharged into Bunker Creek, and the performance of source control actions to determine if additional flow reduction measures or treatment capacity are warranted.

## 5.0 Statutory Determinations

Although this ROD Amendment changes a component of the remedy selected in the 1992 ROD, the portion of the remedy amended by this ROD Amendment continues to be protective of human health and the environment, complies with federal and state requirements that are applicable or relevant and appropriate to the remedial action as identified in this ROD Amendment, is cost-effective, and utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable. This remedy also satisfies the statutory preference for treatment as a principal element of the remedy. Since hazardous substances will continue to remain onsite above levels that allow for unlimited use, the five year review requirements as outlined in the original 1992 ROD will apply unchanged to this ROD Amendment.



Michael F. Gearheard, Director  
Environmental Cleanup Office



Date